

# PATENT ABSTRACTS OF JAPAN

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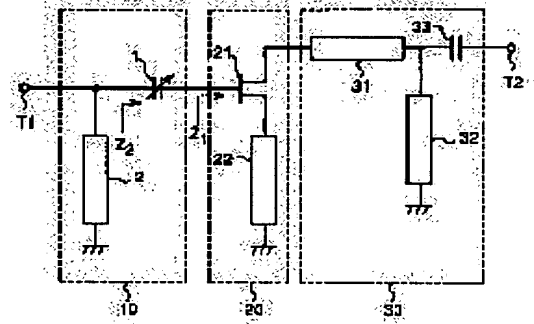
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## (54) HIGH FREQUENCY AMPLIFIER CIRCUIT AND MICRO WAVE INTEGRATED CIRCUIT

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To improve design efficiency without considering a low frequency at the time of design by using a short stub whose other end is directly grounded.

**SOLUTION:** In a high frequency amplifier circuit, an input matching circuit 10 is provided with a variable capacitance element 1 whose one end is connected to the gate terminal of a transistor 21 and the short stub 2 whose one end is connected to the other end of the variable capacitance element 1 and whose other end is directly grounded. Since the variable capacitance element 1 is used in series for matching an input impedance in the input matching circuit 10, the transistor 21 and the short stub 2 are opened for direct current. Thus, the other end of the short stub 2 can directly be grounded without using a capacitor. Thus, the other end of the short stub 2 is directly connected to ground and therefore shorting effect can be obtained in a DC component. Thus, the gain in the low frequency band of not more than an MHz band can effectively be suppressed and the stable operation of the circuit is realized.



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